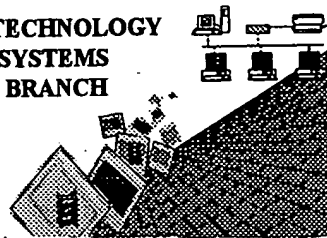


BIOTECHNOLOGY  
SYSTEMS  
BRANCH



0330/ 0590  
10/11/02

**RAW SEQUENCE LISTING**  
**ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/964,059A  
Source: CIPE  
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THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

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TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER**  
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Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
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U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name,  
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
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Revised 01/29/2002



**Does Not Comply  
Corrected Diskette Needed**

**OIPE**

**RAW SEQUENCE LISTING**

DATE: 10/08/2002

PATENT APPLICATION: US/09/964,059A

TIME: 14:15:45

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\10082002\I964059A.raw

1 <110> APPLICANT: Frudakis, Tony  
 3 <120> TITLE OF INVENTION: Efficient Methods and Apparatus for High-Throughput  
 Processing of Gene  
 4 Sequence Data  
 6 <130> FILE REFERENCE: 0201-0001  
 8 <140> CURRENT APPLICATION NUMBER: US 09/964,059A  
 10 <141> CURRENT FILING DATE: 2001-09-26  
 12 <150> PRIOR APPLICATION NUMBER: US 60/274,686  
 13 <151> PRIOR FILING DATE: 2000-03-08  
 15 <160> NUMBER OF SEQ ID NOS: 239

**ERRORED SEQUENCES**

180 <210> SEQ ID NO: 17  
 181 <211> LENGTH: 3260  
 182 <212> TYPE: DNA  
 183 <213> ORGANISM: Homo Sapiens  
 185 <400> SEQUENCE: 17  
 186 agttaatgca cacagtttgg ctagttttgg cttcaaaatt aattaaactg tatcaatgta 60  
 187 ttttgaagtg ttaagtcac tgtatgcttt agctccttct atagatgagg caaatataca 120  
 188 aacagattaa actgactttt acagaataat tattctttta ccttgtttac atggaaagga 180  
 189 atcctccatt ttaggatgca cataaaatgc cagcctatgt tgatgacatt gccttaacac 240  
 190 ttttttttta agtaatttta cagggttagtt aacctgtaaa agaaacagtg gataaacttg 300  
 191 aaaatgctaa tagcaaaaaa cacttcagcc atggcacata caaccagaag ccaatgatat 360  
 192 ccttcaacta tagaaattag cgggtgttttc tgtttattcc tgaagcagga ttccatattc 420  
 193 aagccagaaa ttgtcattca acagaaaaaa tcagggtcaaa acaatcaatc acataatgta 480  
 194 gcaagacaaa agtatgtgct tatgtgaaga aaaacaaaaa caacaaataa ccgaactttt 540  
 195 attttcttga atataatatt gatggcaaga ttgctaagag gtcateccctg tatttagttt 600  
 196 agataaaggc ttccagcata gaacactgtt aagaagtaac tgtcaggagc tatgcagaag 660  
 197 tgatgagagg caaataatat aaaaactaga aaagcagggt ttaattttct atagacttta 720  
 198 ttacacatta ttatgttacg agacaaatgc agataattct taatttatca aatttgtgag 780  
 199 cttaattaac aaaaatattt gaccctcacc agaaaaacag ataactctaa atctactctg 840  
 200 aaaatctaatt caattgcgaa gtattacctt tttggagact atgtattata tcaaagataa 900  
 201 agctactatt ctacagaaac atatgggggc attggcagcc aaccaataat gaagtaaata 960  
 202 ttctaataatt tgggaaaata ctgagaaaac taataaattg tcctggatat tattttattct 1020  
 203 tgcctttaca aaagacttac acatccaaat gagattagtt tagaatagag gtttttagtt 1080  
 204 cagaaaatgt tcaaagtcca atacagtcac ggctaatacag agactagaga acctttataa 1140  
 205 aggtaagtag gcttgaaaac ccttggaaac tgagcagtcct tttttgaac tagcatgttt 1200  
 206 taatcaaagg tatggaatta atcaaatatc aattaagaat tactggaatg cacactcatg 1260  
 207 ccaaatagaca actaacatgt ttttcctac tatgatgact ctttgatttg agtcagatgg 1320  
 208 cataaaaaaa tattgctagc tatacaataa attttactct tctgcttctg ctctctaaag 1380  
 209 aaaaatctta ttttttcaca taagaagctc atggaatcga atgttaatta aagaaaagat 1440  
 210 agggtaagta caactggggg aaagacagta cctctaatta cataggaaat ccatgaaaga 1500

## RAW SEQUENCE LISTING

DATE: 10/08/2002

PATENT APPLICATION: US/09/964,059A

TIME: 14:15:45

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\10082002\I964059A.raw

```

211 attaatacatc ataagagaag aatcattttt ccagtagccc cactaccatg aatgatattt 1560
212 tcatgagcct cggccacctt ctccaatgga tattgagaac ctatcacagg tttcaaccag 1620
213 ccaattttcca ttccagcttg aagggctgct gcatattgct gaaattcctc ctaagaaaag 1680
214 gaaaaacaaa tttctttttg tagtgaaccg tatgatttaa ttttcagaag cattaaaaac 1740
E--> 215 acttcagaat ctaagtgtta taccatgaag agtctcttac aaatgtgtga cttttgtcaa 1700
E--> 216 cttgtccaga actatagaaa aagtagttat ctacagggtta accataaatc ccatctgect 1760
E--> 217 gagacagtgt tagtgtacaa aatacctgtt gtccgtgaaat tattactagt atcacatttc 1820
E--> 218 tatctcaaaa ggtatgctta cctggatata aattatactg tcaccctagt tgtccttctg 1880
E--> 219 gtgactaatc cttaccaact cccactagtc atataactaa gtttaacatc tattcaaact 1940
E--> 220 ttccagcttg ctgagtaggc aaactgtacc aatgttttaag ttaccaaact cagaagtact 2000
E--> 221 tcttttctca ccttggttga ggaaaagaga gtaactccaa ttatactcga ctcttttgcc 2060
E--> 222 atgggtgtctc gtgggtttat ttcaatagta cctctgtctg caacaacctc acatgaaaaa 2120
E--> 223 cagcaattct acagttaaag attactgtaa aatagtgtta aattgtggta aaacattaaa 2180
E--> 224 gtggtaaaaa aaaaaaaaag aaaaggaata cttactatca ctctgctctc atgtgacaga 2240
E--> 225 agactcaagt ctttactaag atttacatta gctaacattt caataattat atcaattcct 2300
E--> 226 ttctcaccaa catacttcta tataataaaa gagaaatgta gagtaagata gcaagtgaag 2360
E--> 227 aactgtaaaa tagctactat ctgtacaaga tattatagaa atatgtttca aatgatatat 2420
E--> 228 aaatgtctaca tctttgagac taataatgca aaatttttaa taatctaatt atataatcac 2480
E--> 229 gatgtaattc caaggtacca gccagaacat ctaaactgat aaaaatttgt actaaatata 2540
E--> 230 ttgctgtagt gaaataaagt ttgtctggaa ttttcagggt ctgactcaa cttgagtata 2600
E--> 231 aaatacttag ctgaaaattt tctatctgta aataaaactt tcataaagaa acaataaatc 2660
E--> 232 aaaagcccca aacccccagg gggctcccat ttttattaat aaacaaaaag caaaagaaga 2720
E--> 233 tatcattagc tgttcgggtt tgcatgattt ttgttgtttt agtgcatttg gttttgttct 2780
E--> 234 aaatgggttta tcatctgttt tgatgactaa ctcttttggg ctcttggttg ttggacgctg 2840
E--> 235 gctcttacaa aaagctacac acatctacat tatattcatt ttattttaac acacacacac 2900
E--> 236 aaatgaatcc ctgtgcccgg gattgacta ggtaccagga atacaaatac aaacataggg 2960
E--> 237 agctcaaaac aaaactagtg agaaagatgg gaaatactac agtcatagct ataaagtaat 3020
E--> 238 gggctaagta acacattagc agaaataaat catagaatac agagaaaaaa ggttaagggt 3080
E--> 239 tgattgcttg ccatggctag ataaagttcc acagagacga tgaactgggc cctcagggat 3140
E--> 240 gaataggagt ttcccaagcc aaaagaaagg aaatagagta aggggaagct agacctgagg 3200
E--> 241 ctgagtcagt ctggaccaaa gaaacagaaa agcaaagatg gaggggactg agaacacaag 3260

```

1800  
- 1860, and so on

```

340 <210> SEQ ID NO: 20
341 <211> LENGTH: 384
342 <212> TYPE: DNA
343 <213> ORGANISM: Homo Sapiens
345 <400> SEQUENCE: 20

```

```

346 acagacagag atagacagag gcagagtcag ggagaggcag agaaagaaag agaacaagaa 60
347 agcttaaaga tagtccaaac gcaaagctgt ctttaaaaaa tgcatactct attactggca 120
348 acaaagtttt ataactata cattttatga accactaatc ctttaattat tcaagatcac 180
349 aacaggggac tcatattata gagtcaagta aatatcatta ccaacatttt atttaacagt 240
350 ttgtctctct taattacatg gagaatgata tagtgactcc ttcattgctt tttttctct 300
351 taacaagcca tatgcaggaa agtttccatg ctgcgcaaac ataaaagaaa gttatatttc 360

```

```

E--> 352 attcctaana gaaaactgaa aagc 384

```

```

815 <210> SEQ ID NO: 63
816 <211> LENGTH: 1300
817 <212> TYPE: DNA
818 <213> ORGANISM: Homo Sapiens
820 <400> SEQUENCE: 63

```

```

E--> 821 nnnattcagt accaaattta ctgtggaaac agccagtaga gaatacaaga aaatgttcaa 60

```

ns in sequence  
see P. 6 for ref location

The type of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

Some error

## RAW SEQUENCE LISTING

DATE: 10/08/2002

PATENT APPLICATION: US/09/964,059A

TIME: 14:15:45

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\10082002\I964059A.raw

```

822 acaggcaagt aaataagtgt cttgtacctt aatgataaat ggtagtagta tagccattta 120
823 taatggcatt aatgattggt ttaatttaac ataatttata agctattgaa gtatggaaaa 180
824 ttataagcat atatattagg ttattaggac tcataaattt atgttattta cttccagttt 240
825 gtgagatgac ttgaattttt catgtttcct attcctttact tccatagaca tggatggata 300
826 atatgggaag agctggtgag atggaactca agcccttcaa tggagaagat tatacatgta 360
827 tcacctttca gcctgatttg tctaagttta aaatgcaaag cctggacaaa gatattgttg 420
828 cactaatggt cagaagagca tatgatattg ctggatccac caaagatgtc aaagtctttc 480
829 ttaatggaaa taaactgcca tgagtatttt cctggatggt aaggataata agggattttg 540
830 taatcattgt caagtgcaaa attgaatttt tccccctccc atatgttttt gtttgtttgt 600
831 ttgtttgttt gtttgagaca gagtctcaca ctgttgcccg ggctggagtg cagtggcacg 660
832 atctcggtc accgcaacct ccacctccca ggttcacgca attctcctgc ctcagcctcc 720
833 caagtagctg ggattacagg tgccctgccac cacacctggc taattttttg tatttttagt 780
834 agagacaggt ttcactatgt tggccaggct ggtctcgaac accagacctc atgatccacc 840
835 cgtcttgccc tcccaaagtg ctgggattac aggcattgagc cactgcacct ggcccaacca 900
836 tatgtatttt cttaccactt ctcacatatg ttcttgaaaa gagaatggta tgccacattt 960
837 tttaatcagc tcatttttaaa cttaccgaag gaattttctt ctcaaagaaa cacctaaaat 1020
838 aaatatttca tgcctttttt ttattttcct tttctttct tttcttgata acctcgctgt 1080
839 gtcacccagg ctggagtaca gtgatgcaat cacggctcac tacagcctgg acctcccagg 1140
840 ctcaagcgat catccacct cagcttctgg agtagctgga aatgcaggca gcaccaccat 1200
841 gccagctaa tttttttttt tctttttaat agaggtgggg atctcactat gttgccagg 1260
842 ctggtcttga actcctgggc tcaagtgate caccacctc 1300

```

1579 &lt;210&gt; SEQ ID NO: 146

1580 &lt;211&gt; LENGTH: 41

1581 &lt;212&gt; TYPE: DNA

1582 &lt;213&gt; ORGANISM: Homo Sapiens

1584 &lt;400&gt; SEQUENCE: 146

E--&gt; 1585 agggggtaga ttttaaaaat ncatgttaat gttatttact n 41

1587 &lt;210&gt; SEQ ID NO: 147

1588 &lt;211&gt; LENGTH: 41

1589 &lt;212&gt; TYPE: DNA

1590 &lt;213&gt; ORGANISM: Homo Sapiens

1592 &lt;400&gt; SEQUENCE: 147

E--&gt; 1593 agggggtaga ttttaaaaat ncatgttaat gttatttact n 41

1595 &lt;210&gt; SEQ ID NO: 148

1596 &lt;211&gt; LENGTH: 41

1597 &lt;212&gt; TYPE: DNA

1598 &lt;213&gt; ORGANISM: Homo Sapiens

1600 &lt;400&gt; SEQUENCE: 148

E--&gt; 1601 aggtgtaaga ttttaaaaat acatgttaat gttatttact n 41

1603 &lt;210&gt; SEQ ID NO: 149

1604 &lt;211&gt; LENGTH: 41

1605 &lt;212&gt; TYPE: DNA

1606 &lt;213&gt; ORGANISM: Homo Sapiens

1608 &lt;400&gt; SEQUENCE: 149

E--&gt; 1609 aggggtanga ttccaataat acatgttaat gttatttact n 41

1611 &lt;210&gt; SEQ ID NO: 150

1612 &lt;211&gt; LENGTH: 41

1613 &lt;212&gt; TYPE: DNA

1614 &lt;213&gt; ORGANISM: Homo Sapiens

nt  
Some errors in Seq. 20



RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/964,059A

DATE: 10/08/2002  
TIME: 14:15:45

Input Set : N:\EBONY'S\EP.txt  
Output Set: N:\CRF4\10082002\I964059A.raw

1616 <400> SEQUENCE: 150  
E--> 1617 aggggtanga ttttaaaaat acatgttaat gttatttact n 41  
1619 <210> SEQ ID NO: 151  
1620 <211> LENGTH: 41  
1621 <212> TYPE: DNA  
1622 <213> ORGANISM: Homo Sapiens  
1624 <400> SEQUENCE: 151  
E--> 1625 aggggtaaga ttttaaaaat acatgttaat gttatttact n 41  
1627 <210> SEQ ID NO: 152  
1628 <211> LENGTH: 41  
1629 <212> TYPE: DNA  
1630 <213> ORGANISM: Homo Sapiens  
1632 <400> SEQUENCE: 152  
E--> 1633 aggggtaaga ttttaaaaat acatgttaat gttatttact n 41  
1687 <210> SEQ ID NO: 158  
1688 <211> LENGTH: 11  
1689 <212> TYPE: DNA  
1690 <213> ORGANISM: Homo Sapiens  
1692 <400> SEQUENCE: 158  
E--> 1693 cntctgagtt a 11  
1695 <210> SEQ ID NO: 159  
1696 <211> LENGTH: 11  
1697 <212> TYPE: DNA  
1698 <213> ORGANISM: Homo Sapiens  
1700 <400> SEQUENCE: 159  
E--> 1701 cntctgagtt a 11  
1703 <210> SEQ ID NO: 160  
1704 <211> LENGTH: 11  
1705 <212> TYPE: DNA  
1706 <213> ORGANISM: Homo Sapiens  
1708 <400> SEQUENCE: 160  
E--> 1709 cntttgagtt a 11  
1711 <210> SEQ ID NO: 161  
1712 <211> LENGTH: 11  
1713 <212> TYPE: DNA  
1714 <213> ORGANISM: Homo Sapiens  
1716 <400> SEQUENCE: 161  
E--> 1717 cntctgagtt a 11  
1719 <210> SEQ ID NO: 162  
1720 <211> LENGTH: 11  
1721 <212> TYPE: DNA  
1722 <213> ORGANISM: Homo Sapiens  
1724 <400> SEQUENCE: 162  
E--> 1725 cntttgagtt a 11  
1727 <210> SEQ ID NO: 163  
1728 <211> LENGTH: 11  
1729 <212> TYPE: DNA  
1730 <213> ORGANISM: Homo Sapiens  
1732 <400> SEQUENCE: 163

some errors as in seq. 20

## RAW SEQUENCE LISTING

DATE: 10/08/2002

PATENT APPLICATION: US/09/964,059A

TIME: 14:15:45

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\10082002\I964059A.raw

E--> 1733 cntctgagtt a 11  
 1735 <210> SEQ ID NO: 164  
 1736 <211> LENGTH: 11  
 1737 <212> TYPE: DNA  
 1738 <213> ORGANISM: Homo Sapiens  
 1740 <400> SEQUENCE: 164  
 E--> 1741 cntctgagtt a 11  
 1743 <210> SEQ ID NO: 165  
 1744 <211> LENGTH: 11  
 1745 <212> TYPE: DNA  
 1746 <213> ORGANISM: Homo Sapiens  
 1748 <400> SEQUENCE: 165  
 E--> 1749 cntctgagtt a 11  
 1751 <210> SEQ ID NO: 166  
 1752 <211> LENGTH: 11  
 1753 <212> TYPE: DNA  
 1754 <213> ORGANISM: Homo Sapiens  
 1756 <400> SEQUENCE: 166  
 E--> 1757 cntctgagtt a 11  
 1759 <210> SEQ ID NO: 167  
 1760 <211> LENGTH: 11  
 1761 <212> TYPE: DNA  
 1762 <213> ORGANISM: Homo Sapiens  
 1764 <400> SEQUENCE: 167  
 E--> 1765 cntctgagtt a 11  
 1767 <210> SEQ ID NO: 168  
 1768 <211> LENGTH: 11  
 1769 <212> TYPE: DNA  
 1770 <213> ORGANISM: Homo Sapiens  
 1772 <400> SEQUENCE: 168  
 E--> 1773 cntttgagtt a 11  
 2330 <210> SEQ ID NO: 238  
 2331 <211> LENGTH: (260) - found 200  
 2332 <212> TYPE: DNA  
 2333 <213> ORGANISM: Homo Sapiens  
 2335 <400> SEQUENCE: 238  
 2336 ctcaggtccc acagcaacaa tatcattcaa actgcaatta aaacatacac acataatata 60  
 E--> 2337 taaggtgaag gtattgaaca ttacaggatt attaactggc attcctcact gtctattcct (180) → 120  
 E--> 2338 aaaatcaaga tgtgggatgg agccttcgtg ctagctataa tggaacacaa ttaatatgaa (240) → 180  
 E--> 2339 attagtcctg ccgatacaat (260) → 200

Some errors as in Seq. 20

## VARIABLE LOCATION SUMMARY

DATE: 10/08/2002

PATENT APPLICATION: US/09/964,059A

TIME: 14:15:46

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\10082002\I964059A.raw

Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of &lt;220&gt; to &lt;223&gt; is MANDATORY if n's or Xaa's are present.

in &lt;220&gt; to &lt;223&gt; section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:20; N Pos. 369  
Seq#:63; N Pos. 1,2,3  
Seq#:146; N Pos. 21,41  
Seq#:147; N Pos. 21,41  
Seq#:148; N Pos. 41  
Seq#:149; N Pos. 8,41  
Seq#:150; N Pos. 8,41  
Seq#:151; N Pos. 41  
Seq#:152; N Pos. 41  
Seq#:158; N Pos. 2  
Seq#:159; N Pos. 2  
Seq#:160; N Pos. 2  
Seq#:161; N Pos. 2  
Seq#:162; N Pos. 2  
Seq#:163; N Pos. 2  
Seq#:164; N Pos. 2  
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Seq#:168; N Pos. 2  
Seq#:169; N Pos. 2  
Seq#:170; N Pos. 2  
Seq#:171; N Pos. 2  
Seq#:172; N Pos. 2  
Seq#:173; N Pos. 2  
Seq#:174; N Pos. 2  
Seq#:175; N Pos. 2  
Seq#:177; N Pos. 4  
Seq#:178; N Pos. 4  
Seq#:179; N Pos. 4  
Seq#:180; N Pos. 4  
Seq#:181; N Pos. 4  
Seq#:182; N Pos. 1,2  
Seq#:183; N Pos. 1,2,3,4,5,6  
Seq#:184; N Pos. 2  
Seq#:185; N Pos. 2  
Seq#:186; N Pos. 2  
Seq#:187; N Pos. 2  
Seq#:188; N Pos. 2  
Seq#:189; N Pos. 4  
Seq#:190; N Pos. 2  
Seq#:191; N Pos. 2  
Seq#:192; N Pos. 2

## VARIABLE LOCATION SUMMARY

DATE: 10/08/2002

PATENT APPLICATION: US/09/964,059A

TIME: 14:15:46

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\10082002\I964059A.raw

Seq#:193; N Pos. 2  
Seq#:194; N Pos. 4  
Seq#:195; N Pos. 4  
Seq#:199; N Pos. 2  
Seq#:200; N Pos. 4  
Seq#:204; N Pos. 4  
Seq#:206; N Pos. 5  
Seq#:208; N Pos. 4  
Seq#:209; N Pos. 2  
Seq#:210; N Pos. 2  
Seq#:212; N Pos. 2  
Seq#:213; N Pos. 2  
Seq#:214; N Pos. 1,2,10  
Seq#:218; N Pos. 2  
Seq#:219; N Pos. 2  
Seq#:220; N Pos. 96,120,148,149,150,175  
Seq#:235; N Pos. 9,10,12  
Seq#:236; N Pos. 9,10,11,12,13



## VERIFICATION SUMMARY

DATE: 10/08/2002

PATENT APPLICATION: US/09/964,059A

TIME: 14:15:46

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\10082002\I964059A.raw

L:215 M:254 E: No. of Bases conflict, LENGTH:Input:1700 Counted:1800 SEQ:17  
M:254 Repeated in SeqNo=17  
L:241 M:252 E: No. of Seq. differs, <211> LENGTH:Input:3260 Found:3360 SEQ:17  
L:352 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:20  
L:821 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:63  
L:1585 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:146  
L:1593 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:147  
L:1601 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:148  
L:1609 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:149  
L:1617 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:150  
L:1625 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:151  
L:1633 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:152  
L:1693 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:158  
L:1701 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:159  
L:1709 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:160  
L:1717 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:161  
L:1725 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:162  
L:1733 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:163  
L:1741 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:164  
L:1749 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:165  
L:1757 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:166  
L:1765 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:167  
L:1773 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:168  
L:1781 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:169  
L:1789 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:170  
L:1797 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:171  
L:1805 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:172  
L:1813 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:173  
L:1821 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:174  
L:1829 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:175  
L:1845 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:177  
L:1853 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:178  
L:1861 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:179  
L:1869 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:180  
L:1877 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:181  
L:1885 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:182  
L:1893 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:183  
L:1901 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:184  
L:1909 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:185  
L:1917 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:186  
L:1925 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:187  
L:1933 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:188  
L:1941 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:189  
L:1949 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:190  
L:1957 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:191  
L:1965 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:192  
L:1973 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:193  
L:1981 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:194

## VERIFICATION SUMMARY

DATE: 10/08/2002

PATENT APPLICATION: US/09/964,059A

TIME: 14:15:46

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\10082002\I964059A.raw

L:1989 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:195  
L:2021 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:199  
L:2029 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:200  
L:2061 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:204  
L:2077 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:206  
L:2337 M:254 E: No. of Bases conflict, LENGTH:Input:180 Counted:120 SEQ:238  
M:254 Repeated in SeqNo=238  
L:2339 M:252 E: No. of Seq. differs, <211> LENGTH:Input:260 Found:200 SEQ:238